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Plants

Alani

Melicope quadrangularis

SPECIES STATUS:

Federally Listed as Endangered

Genetic Safety Net Species

IUCN Red List Ranking- Critically Endangered (CR D)

Hawai'i Natural Heritage Ranking- Critically Imperiled (G1)

Endemism – Kaua'i

Critical Habitat - Designated

SPECIES INFORMATION: A shrub or small tree. Flowers are 1-2 per inflorescence. The young branches are generally covered with fine yellow fuzz but become hairless with age. The thin leathery leaves are oppositely arranged. The upper surface is hairless and the lower surface is sparsely hairy. Known originally from the type material collected in 1909 from Wahiawa Bog on Kaua'i. The species had been presumed extinct when a small subpopulation of 13 individuals was discovered in 1991.

DISTRIBUTION: Wahiawa Bog, Kaua'i.

ABUNDANCE: A total of 13 adult plants.

LOCATION AND CONDITION OF KEY HABITAT: The last remaining plants are found growing in diverse lowland forest that ranges from mesic to wet conditions. These plants are on State land. Strawberry guava grows in this habitat and has the potential to seriously degrade the habitat.

THREATS:

- Competition from alien plant species;
- Stochastic extinction;
- Reduced reproductive vigor due to the small number of remaining individuals.

CONSERVATION ACTIONS: The goals of conservation actions are not only to protect current populations, but also to establish new populations to reduce the risk of extinction. In addition to common statewide and island conservation actions, specific actions include:

- Survey historical range for surviving populations;
- Establish secure *ex-situ* stocks with complete representation of remaining individuals;
- Augment wild population and establish new populations in safe harbors.

MONITORING:

- Continue surveys of population and distribution in known and likely habitats;
- Monitor plants for insect damage and plant diseases.

RESEARCH PRIORITIES:

- Develop proper horticultural protocols and pest management;
- Survey *ex-situ* holdings and conduct molecular fingerprinting;
- Conduct pollination biology and seed dispersal studies;
- Map genetic diversity in the surviving populations to guide future re-introduction and augmentation efforts.

References:

Hawai'i Natural Heritage Program, 2005. Hawaii Natural Heritage Program Search, <http://www.hinhp.org/trackedspecies.asp?taxa=P&usesa=>.

Wagner, W.L., Herbst, D.R., and Sohmer, S.H., 1999. Manual of the Flowering Plants of Hawai'i-- Revised Edition. Honolulu, HI: University of Hawaii Press and Bishop Museum Press. 1853p.

Wagner, W. L., D. R. Herbst, and D. H. Lorence. 2005. Flora of the Hawaiian Islands website. <http://ravenel.si.edu/botany/pacificislandbiodiversity/hawaiianflora/index.htm> [August, 2005].